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(54) Title: NOVEL RECOMBINANT ANTICOAGULANT PROTEINS

(57) Abstract: Novel recombinant anticoagulation proteins, methods of their use and methods of their production are described. In particular, recombinant fusions of annexin V (ANV) and Kunitz protease inhibitors (KPI) that possess potent anticoagulant activity are provided. The fusions, abbreviated ANV: KPI, utilize ANV having high affinity for phosphatidyl-L-serine with various KPI's to target serine proteases in membrane-associated coagulation complexes in the blood coagulation cascade. ANV:KPIs are potentially useful antithrombotic drugs permitting localized passivation of thrombogenic vessel walls and associated thrombi.

